

In the Claims

The claims have been amended as follows:

1. (currently amended) A method of forming openings in a substrate comprising:
providing a substrate having a first surface and a second surface;
attaching a first removable support film to said first surface of said substrate;
forming at least one opening in said substrate by entering said first removable support film on said first surface, traversing through said substrate and exiting said substrate at said second surface; and
attaching a second removable support film to said first removable support film using an interface layer, whereby sufficient pressure is applied so as to extrude a portion of said interface layer into said at least one opening in said first removable support film,
wherein said first removable support film prevents damage to said substrate by constraining movement of said substrate during formation of said at least one opening.
2. (currently amended) The method of claim 1 further including attaching a frame to said second surface of said substrate, wherein after removal of said first removable support film, said frame constraining movement of said substrate during subsequent processing steps.

3. (currently amended) The method of claim 1 wherein ~~said removable support film comprises a peelable support film, said~~ first and second removable peelable support films ~~are~~ being removed by removing peeling said first and second removable peelable support films ~~film~~ in a direction substantially parallel to said substrate.

4. (original) The method of claim 1 wherein said substrate is selected from the group consisting of a greensheet, mask layer, metal layer, organic layer, inorganic layer and composites thereof.

5. (original) The method of claim 1 wherein said at least one opening is selected from the group consisting of a via, line, deep hole and channel.

6. (currently amended) A method of processing greensheets for use as microelectronic substrates comprising:

providing a greensheet having a first surface and a second surface; ~~and~~

attaching a first removable support film to said first surface of said greensheet;

forming a plurality of openings in said greensheet by sequentially traversing through

said first removable support film, through said greensheet and exiting said

greensheet at said second surface;

depositing an interface layer on a second removable support film; and

attaching said second removable support film to said first removable support film

using said interface layer, whereby sufficient pressure is applied so as to extrude a

portion of said interface layer into said plurality of openings in said first removable support film,

wherein sequentially processing said first removable support film ~~and then said greensheet whereby said first support film~~ constrains movement of said greensheet to prevent damage thereto said greensheet during formation of said plurality of openings.

7. (currently amended) The method of claim 6 further including attaching a frame to said second surface of said greensheet, wherein after removal of said first and second removable support films~~film~~, said frame constrains movement of said greensheet during subsequent processing steps.

8. (original) The method of claim 6 wherein said greensheet comprises a material selected from the group consisting of alumina, glass ceramic, aluminum nitride, borosilicate glass, polymeric binders, polymers, metal, plastic, oxides of ceramics, glass frit and glass grit.

9. (currently amended) The method of claim 6 wherein said first and second removable support film ~~has~~ films each have a thickness ranging from about 0.5 mils to about 6 mils.

10. (currently amended) The method of claim 6 wherein said first and second removable support film ~~comprises~~ films each comprise a material that has sufficient rigidity to prevent damage to said greensheet during said processing steps.

11. (currently amended) The method of claim 10 wherein said material of said first and second removable support film ~~is~~ films are each selected from the group consisting of a metal, wood product, ceramic, polymer, polyester, polyethylene, polyethylene naphthlate, cellulosel based paper, polypropylene, silicone and composites thereof.

12. (currently amended) The method of claim 6 wherein said first removable support film is cast to said greensheet.

13. (currently amended) The method of claim 6 wherein said step of sequentially ~~processed~~ processing said first removable support film and said greensheet comprises punching a plurality of openings in said first removable support film and said greensheet using a punching tool that enters said first removable support film, traverses therethrough, enters said greensheet at said first surface, traverses through said greensheet and exits said greensheet at said second surface.

14. (currently amended) The method of claim 6 further including forming at least one angled opening in said greensheet to provide said first removable support film attached to

said greensheet with at least one weak joint for removing said first support film from said greensheet.

15. (currently amended) A method of processing greensheets for use as microelectronic substrates comprising:

providing a greensheet having a first surface and a second surface; ~~and~~
 attaching a first peelable support film to said first surface of said greensheet;
 forming a plurality of openings in said greensheet by sequentially traversing through
~~entering~~ said first peelable support film on said first surface, traversing through said
 greensheet and exiting said greensheet at said second surface;
depositing an interface layer on a second peelable support film; and
adhering said first and second peelable support films to each other using said interface
layer whereby sufficient pressure is applied so as to extrude a portion of said
interface layer into said plurality of openings at least in said first peelable support
film,

wherein said first peelable support film has substantial rigidity to prevent damage to said greensheet by constraining movement of said substrate during formation of said plurality of openings.

16. (original) The method of claim 15 wherein said plurality of openings are selected from the group consisting of a via, line, deep hole, channel and combinations thereof.

17. (original) The method of claim 15 further including attaching a frame to said second surface of said greensheet.

18. (canceled) ~~The method of claim 15 further including attaching a second peelable support film to said first peelable support film.~~

19. (currently amended) The method of claim 15~~18~~ wherein said second peelable support film comprises a material selected from the group consisting of a metal, wood product, ceramic, polymer, polyester, polyethylene, polyethylene naphthlate, cellulosid based paper, polypropylene, silicone and composites thereof.

20. (canceled) ~~The method of claim 18 wherein said step of attaching said second peelable support film to said first peelable support film comprises:~~

~~forming said plurality of openings traversing through said first peelable support film and said greensheet;~~

~~depositing an interface layer on said second peelable support film; and~~

~~adhering said first and second peelable support films to each other using said interface layer whereby sufficient pressure is applied so as to extrude a portion of said interface layer into said plurality of openings at least in said first peelable support film.~~

21. (currently amended) The method of claim 15~~20~~ further including the steps:

screening a metal paste over said second surface of said greensheet so as to fill said plurality of openings and form a plurality of conductive features within said greensheet; and

peeling ~~said stacked layers of~~ said first peelable support film, said interface layer and said second peelable support film off of said greensheet in a direction that is substantially parallel with said first surface of the greensheet without damaging said greensheet and deposited metallurgy.

22. (original) The method of claim 15 further including forming at least one angled opening in said greensheet to provide said first support film attached to said greensheet with at least one weak joint for peeling said first support film off of said greensheet.

23.-29. (canceled)

30. (new) The method of claim 1 wherein said first and second removable support films comprise, respectively, first and second peelable support films.

31. (new) The method of claim 6 wherein said first and second removable support films comprise, respectively, first and second peelable support films.